U.S. Department of the Interior
Bureau of Land Management

Playa Solar Project
(Dry Lake Solar Energy Zone Parcels 2, 3, and 4)
DOI-BLM-NV-S010-2014-0127-EA

Decision Record

May 2015

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DECISION RECORD
Environmental Assessment
NEPA Number DOI-BLM-NV-S010-2014-0127-EA
Playa Solar Project
(Dry Lake Solar Energy Zone Parcels 2, 3, and 4)

It is my decision to approve the solar energy right-of-way lease/grants to Playa Solar, LLC (Applicant), a wholly owned subsidiary of First Solar, Inc., subject to the terms, conditions, and stipulations, Plan of Development, and environmental protection measures developed by the Department of the Interior and reflected in this Decision Record. It is also my decision to collect the $1,836 per acre fee identified in the Solar Regional Mitigation Strategy for the Dry Lake Solar Energy Zone (SRMS). With incorporation of the mitigation measures described in the December 2014 Environmental Assessment (EA) analyzing the environmental effects of the proposed development of parcels 2, 3, and 4 of the Dry Lake Solar Energy Zone (SEZ) as described below (Project or Proposed Action) and in the March 2015 Finding of No New Significant Impact (FONNSI), the Proposed Action will not result in any new significant effects to the quality of the human environment that were not fully analyzed in the Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (Solar PEIS) [Bureau of Land Management (BLM) and U.S. Department of Energy (DOE)] 2010; BLM and DOE 2012). A project-specific Environmental Impact Statement (EIS) is not required. The EA is provided in Appendix A to this Decision Record; the FONNSI is provided in Appendix B. The Biological Opinion (BO) issued on May 1, 2015 is provided in Appendix C.

The authority for these decisions is contained in Title V of the Federal Land Policy Management Act of 1976 (FLPMA).

I. ALTERNATIVES CONSIDERED

The EA considered two alternatives: the No Action Alternative and the Proposed Action, which is the Preferred Alternative.

A. Proposed Action

The Proposed Action is described in detail in Chapter 2 of the EA. The Applicant proposes to construct, operate, maintain, and decommission the Project, consisting of up to a 200-megawatt (MW) alternating current solar photovoltaic (PV) power generating facility on approximately 1,710 acres of BLM-administered land located within parcels 2, 3, and 4 of the Dry Lake SEZ in Clark County, Nevada. Project components include onsite facilities, offsite facilities, and temporary facilities needed to construct the Project. Major Onsite facilities are comprised of solar array blocks of First Solar PV modules, a substation, and operation and maintenance facilities. Offsite facilities include a 3,500-foot (0.7 mile) 230 kilovolt (kV) generation tie transmission line (gen-tie), access roads, well and water pipeline, and electric distribution and communication lines. Temporary facilities, which would be removed at the end of the construction period, include mobilization, laydown, and construction areas as well as one or more temporary ponds. Power produced by the Project would be conveyed to the Nevada Power bulk transmission system via the gen-tie, which would interconnect to NV Energy's existing Harry Allen Substation. This Decision Record documents the BLM's approval of only those aspects of the Project that will be developed, operated, maintained, and decommissioned on BLM-managed public lands.

B. No Action Alternative

The No Action Alternative was not selected because the Project site is located in a SEZ, and so has been identified as a priority area for utility-scale solar energy development where the BLM will prioritize solar energy and associated transmission infrastructure development (BLM and DOE 2012). Based on the results of the auction process and subsequent development activity, the successful bidders have demonstrated a substantial commitment to developing the solar resource in this SEZ (BLM 2014a). Accordingly, it is reasonably foreseeable that some form of utility-scale solar development would occur in this location in the future in the absence of the Proposed Action. Section 2.3 of the attached EA (p. 2-31) describes the No Action Alternative. Impacts of the No Action Alternative are analyzed on a resource-by-resource basis throughout Chapter 3 of the attached EA (p. 3.1-1 et seq.).

In light of the location within an approved SEZ, alternative locations, project sizes, and technologies are not analyzed in detail in the attached EA but, rather, are addressed and analyzed in the Solar PEIS. The EA tiers from that analysis. See Section 2.4 of the attached EA (p. 2-32), which describes alternatives considered but eliminated from further analysis.

II. PLAN CONFORMANCE AND CONSISTENCY

The Proposed Action has been reviewed and, as explained in Section 1.4 of the attached EA (p. 1-5 et seq.), found to be in conformance with the Las Vegas Resource Management Plan (RMP) (BLM/LVFO 1998) as amended by the Solar PEIS.[1]

III. COMPLIANCE WITH MAJOR LAWS

Utility-scale solar energy development projects in SEZs must comply with National Environmental Policy Act (NEPA) and other laws, including, but not limited to, the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA), and other applicable regulations and policies. The BLM has taken a number of steps through the Solar PEIS to facilitate future development in SEZs in a streamlined and standardized manner as described in the EA.

A. Endangered Species Act

The BLM completed programmatic consultation with the U.S. Fish and Wildlife Service (USFWS) on July 20, 2012 under ESA Sections 7(a)(1) and 7(a)(2) regarding the overall Western Solar Plan and the potential effects on listed (endangered and/or threatened) species and designated critical habitat from expected solar energy development within each of the designated SEZs (USFWS 2012). The USFWS issued a programmatic Biological Opinion and Conservation Review for the Solar PEIS (Programmatic BO) (USFWS 2012), which concluded that the establishment of BLM's Western Solar Plan is not likely to jeopardize the continued existence of ESA-listed species or destroy or adversely modify designated or proposed critical habitat. The Project will implement the following applicable measures from the Programmatic BO (USFWS 2012).

- The Project is located in a BLM identified priority area for solar energy development (i.e., SEZ) and has been sited and designed to avoid impacts on important, sensitive, or unique resources, including aquatic habitat and habitats supporting listed species.

[1] On Friday, October 10, 2014, the BLM issued a Notice of Availability of the Las Vegas and Pahrump Field Offices Draft Resource Management Plan and Draft Environmental Impact Statement, Nevada (79 FR 61334-01). Following the conclusion of the public participation process for the proposed RMP revision and issuance of a Final Environmental Impact Statement, the RMP revision will replace the existing Las Vegas RMP.

- As detailed in recent hydrologic modeling (Tetra Tech Inc. 2012a, b), the Project would not completely avoid surface water or groundwater withdrawals that have the potential to affect sensitive habitats (e.g., aquatic, wetland, and riparian habitats). The proposed groundwater withdrawal associated with the Project would be short term, however, occurring over the 18-month Project construction window; no long term adverse impacts are anticipated.

- As necessary, the Applicant would develop a Groundwater Monitoring and Reporting Plan (referred to in the Solar Programmatic Biological Opinion as a Water Resources Mitigation and Monitoring Plan) to be reviewed and approved by the BLM. The Groundwater Monitoring and Reporting Plan would document pre-construction baseline groundwater conditions, guide groundwater monitoring and reporting, and document project-related groundwater use to ensure that the Applicant stays within the volume analyzed pursuant to BLM's NEPA and ESA processes.

- The Project would not result in a point of groundwater withdrawal being moved closer to locations supporting the groundwater-dependent species and/or increased pumping in the regional carbonate aquifer in areas with a significant potential to affect habitat for those species (albeit the total consumptive groundwater use may remain the same).

The Programmatic BO does not contain an incidental take statement for individual project-specific actions within SEZs. Section 7(a)(2) consultation would occur, as necessary, at the level of individual solar energy projects and would tier to programmatic consultation and resulting programmatic Biological Opinion for SEZs. A Biological Assessment (BA) was prepared for the Project in January 2015 to address impacts of the Project to federally listed species (BLM 2015). Project-specific consultation concluded on May 1, 2015 with the USFWS's issuance of the BO and incidental take statement, which is included in this Decision Record as Appendix C. The Project will implement applicable mitigation measures identified in the BO as part of this decision. The Project-specific BO determines that:

- Impacts of the Proposed Action to desert tortoise (*Gopherus agassizii*) are consistent with those analyzed in the Programmatic BO for the Western Solar Plan. No additional impacts are anticipated to desert tortoise beyond those that are already addressed in the Programmatic BO. The Project may affect, and is likely to adversely affect, but will not jeopardize the continued existence of the Mojave population of the desert tortoise. Conservation measures and mitigation measures designed to avoid, minimize and mitigate for adverse effects to this species have been incorporated into the Proposed Action. The BLM will collect remuneration fees to offset residual impacts to desert tortoises from project-related disturbance to desert tortoise habitat. Remuneration fees will be used for management actions expected to promote recovery of the desert tortoise over time, including management and recovery of desert tortoise in Nevada. Actions may involve habitat acquisition, population or habitat enhancement, increasing knowledge of the species' biological requirements, reducing loss of individual animals, documenting the species status and trend, and preserving distinct population attributes. Fees will be used to fund the highest priority recovery actions for desert tortoises in Nevada. The current rate is $843 per acre of disturbance, as indexed for inflation, effective March 1, 2015. The next adjustment will become effective March 1, 2016. The fee rate will be indexed for inflation based on the Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U) on January 31st of each year, becoming effective March 1st. Fees assessed or collected for projects covered under this biological opinion will be adjusted based on the current CPI-U for the year they are collected. Information on the CPI-U can be found on the internet at: http://stats.bls.gov/news.release/cpi.nr0.htm.

- Critical Habitat established for the desert tortoise may be directly and indirectly impacted by the Proposed Action through the translocation of desert tortoises that occur within the Project Area to the portion of the proposed translocation area that overlaps with the Mormon Mesa Critical Habitat Unit. The Project would not appreciably diminish the value of designated Critical Habitat

for both the survival and recovery of the desert tortoise. Desert tortoises will be translocated as stipulated in the Desert Tortoise Translocation Plan for the Dry Lake SEZ consistent with Section 7 consultation for the Proposed Action. The Project is not likely to result in the destruction or adverse modification of designated Critical Habitat for the desert tortoise.

- Implementation of the Project may affect, and is likely to adversely affect, but will not jeopardize the continued existence of the Moapa dace (*Moapa coriacea*). The Proposed Action would contribute to ongoing cumulative effects to this species consistent with those analyzed and identified in the January 20, 2006 programmatic biological opinion entitled the *Intra-Service Programmatic Biological Opinion for the Proposed Muddy River Memorandum of Agreement Regarding the Groundwater Withdrawal of 16,100 Acre-Feet per Year from the Regional Carbonate Aquifer in Coyote Spring Valley and California Wash Basins, and Establish Conservation Measures for the Moapa Dace, Clark County, Nevada* (2006 PBO).

- Impacts of the Proposed Action to Yuma clapper rail (*Rallus longirostris yumanensis*) and southwestern willow flycatcher (*Empidonax traillii extimus*) are consistent with those analyzed in the Programmatic BO for the Western Solar Plan. No additional impacts are anticipated to Yuma clapper rail and southwestern willow flycatcher beyond those that are already addressed in the Programmatic BO. Based on the best available science, the Project may affect, is not likely to adversely affect the Yuma clapper rail and the southwestern willow flycatcher. The yellow-billed cuckoo (*Coccyzus americanus*) was not addressed in the Programmatic BO for the Western Solar Plan since the species was not listed at the time, but subsequently was listed and so addressed in the Project-specific BO. Based on the best available science, the Project may affect, is not likely to adversely affect the yellow-billed cuckoo.

B. National Historic Preservation Act

The BLM has taken numerous actions to comply with requirements of the NHPA in relation to the Solar PEIS, including with regard to solar project development within SEZs. The BLM consulted with Indian Tribes, the State Historic Preservation Offices (SHPOs) from the six states, the Advisory Council on Historic Preservation (ACHP), and the National Trust for Historic Preservation (NTHP). A Solar Programmatic Agreement (Solar PA) entitled *Programmatic Agreement among the United States Department of the Interior, Bureau of Land Management, the Arizona State Historic Preservation Officer, the California State Historic Preservation Officer, the Colorado State Historic Preservation Officer, the New Mexico State Historic Preservation Officer, the Nevada State Historic Preservation Officer, the Utah State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding Solar Energy Development on Lands Administered by the Bureau of Land Management* was fully executed by all parties on September 24, 2012 (BLM et al. 2012). The Solar PA describes the process by which the BLM will comply with Section 106 of the NHPA for proposed solar projects within SEZs.

The BLM followed the process set forth in the Solar PA by engaging in project-specific consultation with the SHPO, Indian Tribes, other consulting parties, and the ACHP regarding inventory, eligibility, effect, treatment, and the consideration of post-review discoveries.

Letters requesting government-to-government consultation under Section 106 and the American Indian Religious Freedom Act (AIRFA) were sent to the following Tribes on October 16, 2014: Chemehuevi Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, Hopi Tribe, Kaibab Band of Paiutes, Las Vegas Paiute Tribe, Moapa Band of Paiutes, Pahrump Paiute Tribe, Paiute Indian Tribe of Utah, San Juan Southern Paiute Tribe, and Timbisha Shoshone Tribe. On December 9, 2014, the BLM contacted each of these Tribes by telephone. To date, one letter response has been received. The Hopi Tribe replied on November 3, 2014, stating that they did not believe that the Proposed Action would

affect cultural resources significant to the Hopi Tribe, and requesting that if any cultural features are encountered during Project activities, that activities be discontinued and the SHPO consulted. Since no historic properties will be directly affected by the undertaking, tribal concerns mainly focused on issues surrounding tortoise habitat and groundwater use. On January 8, 2015, the representatives for the Colorado River Indian Tribe contacted the BLM for an extended comment period that ended on January 8, 2015. A telephone meeting with the representatives was held on January 15, 2015 and all issues were addressed. The Colorado River Indian Tribes representatives asked if any cultural sites were found within the SEZ from the surveys or if there were any direct impacts. There was also information provided on indirect impacts to the area and what those might be. There has been no further communication or issued raised with any of the Tribes listed on impacts from the Solar Energy Zone.

After completing a Class III inventory, the BLM determined that the project would have no direct effect on historic properties listed in or eligible for the National Register. The Nevada SHPO concurred in this determination. The BLM determined that the project would have adverse indirect effects (visual impacts) on three eligible historic properties outside of the SEZ: the Old Spanish Trail/Mormon Wagon Road; the SP, LA, and SL Railroad now known as the UP Railroad; and the Arrowhead Highway. To mitigate the adverse effects to these linear properties, the BLM and SHPO have executed a Memorandum of Agreement and begun developing a historic property treatment plan (HPTP), which will be finalized prior to initiating surface disturbing activities associated with the project. The HPTP will be developed in consultation with the Old Spanish Trail Association, interested tribes, Nevada SHPO, and any other interested effected parties and stakeholders, and will consider the establishment of kiosks located near the effected historic properties. Such potential kiosks would focus on providing an interpretation of the history of the transportation corridor from Native American Trails to the Interstate Highway. The BLM, in consultation with interested parties and the SHPO, will also consider other interpretative measures. The HPTP shall be consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 CFR 44716-37) and the Mitigation Standards for Historical Resources of Local and State Significance (BLM, 2014).

C. Clean Water Act Jurisdictional Determination

As described in the Draft Solar PEIS; the Dry Lake SEZ is located within the Garnet Valley Hydrographic Area, a closed basin that is not hydraulically connected to the Colorado River Basin (BLM and DOE, 2010 (p. 11.3-53).

IV. TERMS / CONDITIONS / STIPULATIONS

The BLM imposed specific terms, conditions, and stipulations as set forth in the Solar PEIS, the March 2014 Solar Regional Mitigation Strategy for the Dry Lake Solar Energy Zone (SRMS), the EA, and the Project-specific BO included in this Decision Record as Appendix C. Mitigation Measures and design features required for the Project are included in Appendix D. Additional terms and conditions will be included in the right-of-way grant.

A. Solar PEIS Design Features

In accordance with the Solar PEIS ROD, the Applicant incorporated design features into the Project development process to avoid and minimize impacts to the surrounding environment, including the design features set forth in Section 2.2.17.1 of the EA (p. 2-24 et seq.). Additionally, in accordance with the design features and other requirements, the Applicant will prepare the following management plans and submit them to the BLM for approval following the issuance of a right-of-way grant for the Project:

- Bird and Bat Conservation Strategy

- Decommissioning and Site Reclamation Plan
- Desert Tortoise Translocation Plan
- Dust Abatement Plan
- Spill Prevention and Emergency Response Plan
- Hazardous Materials and Waste Management Plan
- Health and Safety Program
- Groundwater Monitoring and Reporting Plan
- Fire Management Plan
- Lighting Management Plan
- Integrated Weed Management Plan
- Raven Management Plan
- Site Rehabilitation and Restoration Plan
- Stormwater Pollution Prevention Plan
- Site Drainage Plan
- Traffic Management Plan
- Surface Water Quality Management Plan
- Worker Education and Awareness Plan (WEAP)

B. Solar Regional Mitigation Strategy for the Dry Lake Solar Energy Zone

Through the Western Solar Plan, the BLM adopted a policy that it would develop regional mitigation plans or strategies for SEZs. The BLM prepared the Solar Regional Mitigation Strategy (SRMS) for the Dry Lake SEZ, which it issued on March 17, 2014. Preparation of the SRMS involved a significant amount of public involvement, including four public workshops, several web-based meetings, and several public comment opportunities. The SRMS presents an approach for compensating for the unavoidable impacts, sometimes called residual impacts, that are expected from development of the Dry Lake SEZ. The SRMS takes into account the resource conditions of the land and regional trends informed by the BLM's recent Rapid Ecoregional Assessments, and was developed in collaboration with stakeholders to address key issues such as offsite mitigation and the costs associated with implementation of mitigation.

The SRMS, together with the EA's identification of unavoidable impacts of the Project (summarized below), have assisted the BLM in determining whether and to what extent to require compensatory mitigation. Through this decision, the BLM has determined that it will compensate for unavoidable impacts by collecting a per-acre mitigation fee to be paid by the right-of-way holder. Consistent with the recommendations in the SRMS, the amount of the mitigation fee will be $1,836 per acre disturbed by development. To ensure the effectiveness of the compensatory mitigation projects implemented with the required mitigation fee, the BLM will also require the right-of-way holder to contribute funds as needed to the BLM for reasonable costs for monitoring of the compensatory mitigation projects. These long-term monitoring costs were not included in the final calculations of the mitigation fee in the SRMS prepared for the Dry Lake SEZ projects.

The compensatory mitigation fee will be collected prior to BLM issuing a notice to proceed, and will be used to address the unavoidable impacts that the BLM has determined warrant compensatory mitigation. The separate contributed funds for the monitoring of mitigation projects will be provided by the right-of-way holder to BLM as needed for the monitoring of the compensatory mitigation projects, as required by the right-of-way grant. The BLM plans to initiate a separate NEPA and decision-making process to identify how and where to invest the compensatory mitigation fees it collects. The BLM intends to hold a public workshop within 90 days of signing this decision to solicit input on that process.

The decision to impose this compensatory measure is consistent with the procedures described by IM 2013-142 (June 13, 2013) and draft Manual Section 1794, "Regional Mitigation," which includes guidance for management of funds collected as part of the restoration, acquisition, or preservation portion of the total mitigation fee by an independent third party. Regional mitigation actions funded to offset those impacts may require additional NEPA analysis by the BLM prior to implementation. The EA identifies unavoidable impacts of the Proposed Action for which mitigation is required:

- General and special status wildlife species and habitat. See EA Section 3.7 regarding non-listed wildlife species; Section 3.9 regarding desert tortoise; and Section 3.10 regarding non-listed vegetation species. Offsite mitigation actions funded by SRMS monies that would benefit wildlife species and habitat could include, but would not necessarily be limited to, restoration of native vegetation and site protection activities. Because wildlife habitat is an ecosystem service provided by native vegetation, mitigation for vegetation would benefit general and special-status wildlife species.

- Migratory birds (EA Section 3.8). Specific mitigation funds will be set aside as a result of this decision to locate and pull hollow mine markers in the district to help offset potential impacts to migratory birds.

- Soil resources (EA Section 3.14). Offsite mitigation actions funded by SRMS monies that would benefit soil resources could include, but would not necessarily be limited to, increased resource monitoring and law enforcement patrols to prevent soil degradation and enable early detection and restoration activities that would prevent further declines, and the development of Best Management Practices (BMPs) and techniques for restoring cryptobiotic crusts.

- Visual resources (EA Section 3.21). Offsite mitigation actions funded by SRMS monies that would benefit visual resources could include, but would not necessarily be limited to the application of permeon to existing scars on the landscape and/or trail restoration in the Gold Butte Area of Critical Environmental Concern (ACEC).

C. Project-specific Mitigation Measures

The analysis in the EA relies upon and tiers to the protective measures and design features established in the Solar PEIS, and updates them to include Mitigation Measure CR-1 (EA, p. 3.5-6), regarding cultural resources; and Mitigation Measures VR-1, VR-2, VR-3, and VR-4 (EA, pp. 3.21-9, 3.21-10), regarding visual resources. Although cultural resource 26CK9997 has been determined not to be a historic property under Section 106 of the NHPA, avoidance measures could feasibly reduce potential impacts to this cultural resource and would be accomplished through the implementation of Mitigation Measure CR-1:

> **Mitigation Measure CR-1:** The construction zone shall be narrowed or otherwise altered to avoid intact portions of resource 26CK9997, and construction shall be restricted to previously disturbed road beds and graded areas where portions of the trail have already been destroyed. Resource 26CK9997 shall be designated an Environmentally Sensitive Area. Prior to construction, the resource shall be relocated by a qualified archaeologist and shall be marked with exclusion markers to ensure avoidance. Protective fencing shall not identify the protected areas as cultural resource areas in order to discourage unauthorized disturbance or collection of artifacts. A qualified archaeologist shall monitor construction within 100 feet of the Environmentally Sensitive Area.
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> If avoidance of resource 26CK9997 is determined to be infeasible, then, prior to any Project-related ground disturbing activities, a detailed treatment plan shall be prepared and implemented by a qualified archaeologist (defined as one who meets the Secretary of the Interior's professional qualification standards for archaeology). The treatment plan shall include a research design and a scope of work for data recovery of the portion(s) of the resource to be affected by the Proposed Action. Treatment could consist of, but would not be not limited to, sample excavation, surface artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion of the significant resource to be impacted by the Proposed Action. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, and curation of artifacts and data at an approved facility.
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> **Mitigation Measure VR-1**: Methods to minimize glint and glare effects shall include, but are not limited to, the following:
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> - Limit the use of Project signs and construction signs. Beyond those required for basic facility and company identification for safety, navigation, and delivery purposes, commercial symbols or signs and associated lighting on buildings and other structures shall be prohibited.
>
> - Utilize retroreflective or luminescent markers in lieu of permanent lighting to the extent possible.

- Minimize offsite visibility of all commercial symbols and signs and associated lighting. Necessary signs shall be made of nonglare materials and utilize unobtrusive colors. The reverse sides of signs and mounts shall be painted or coated by using a suitable color selected from the BLM Standard Environmental Color Chart to reduce contrasts with the existing landscape; however, placement and design of any signs required by safety regulations must conform to regulatory requirements.

Mitigation Measure VR-2: Methods to minimize lighting effects shall include, but are not limited to, the following:

- Lighting control shall be through timers, sensors, dimmers, or switches that are available to facility operators.

- Vehicle mounted lights over permanently mounted lighting shall be used whenever possible for nighttime maintenance activities.

- Vehicle mounted lighting shall be aimed toward the ground to avoid causing glare and sky glow.

Mitigation Measure VR-3: Methods to minimize visual dominance through site design shall include, but is not limited to, the following:

- Appropriate building and structural materials and surface treatments (i.e., paints or coatings designed to reduce contrast and reflectivity) shall be used to minimize visual impacts. A careful study of the site shall be performed to identify appropriate colors and textures for materials. Materials and surface treatments shall repeat and/or blend with the existing form, line, color, and texture of the landscape. The typical viewing distances and landscape shall be considered when choosing colors. Appropriate colors for smooth surfaces often need to be two to three shades darker than the background color to compensate for shadows that darken most textured natural surfaces. The BLM Standard Environmental Color Chart and guidance shall be referenced when selecting colors.

- Appropriately colored materials for structures or stains/coatings to blend with the Project's backdrop shall be used. Materials, coatings, or paints having little or no reflectivity shall be used whenever possible.

- Solar panel supports (i.e., posts, brackets, and tables) shall be color treated or galvanized to reduce visual contrast within the landscape setting to the extent possible.

- The Applicant shall ensure power poles utilize colors and styles already existing in the visual landscape of the SEZ. The proponent shall ensure the colors of the proposed power poles do not stand out from the other utility lines. The preferred material for the steel monopoles is CorTen weather steel or galvanized steel dull finish.

- Non-specular conductors and non-reflective coatings on insulators for electricity transmission/distribution facilities shall be used. Galvanized pole finish dulls over time and becomes non-reflective.

- If determined necessary, approved color treatment practices may be used to reduce visual color contrast of graveled or ungraveled surfaces.

- Offsite mitigation of visual impacts shall be implemented. Offsite mitigation serves as a means to offset and/or recover the loss of visual landscape integrity. Appropriate offsite

mitigation has been determined and outlined in the Dry Lake SEZ SRMS and is addressed through payment by the Applicant of the per acre fee identified in Paragraph B.

Mitigation Measure VR-4: Methods to minimize visual dominance during operations and maintenance shall include, but is not limited to, the following:

- Compliance with the terms and conditions for VRM mitigation shall be monitored by the Applicant. Consultation with the BLM shall be maintained through operations and maintenance of the Project, employing an adaptive management strategy and modifications, as necessary and approved by the BLM.
- Painted and color treated facilities shall be kept in good repair and repainted when the color fades or flakes.
- The use interim restoration shall be employed during the operating life of the Project as soon as possible after land disturbances.
- Panels shall be deployed and operated to avoid high intensity light (glare) reflected offsite. Where offsite glare is unavoidable fencing with privacy slats or similar approved screening materials shall be used if possible to create a visual barrier.

In addition to the Project-specific mitigation measures identified in the EA and set forth above, the BLM will also require the Applicant to implement the measure set forth below to offset the effects of groundwater withdrawal on groundwater-dependent species and their habitats. The BLM has determined that the use of up to 1,325 acre feet of groundwater for the 18-month construction window and minimal groundwater for operations of the Playa Solar Project could contribute to ongoing adverse effects to groundwater dependent springs and associated aquatic communities including listed and sensitive resources such as the Moapa dace. These impacts, however, would be short term, occurring over a limited 18-month project construction window, and would not result in long term adverse impacts to the groundwater system or listed or sensitive resources.

Populations of Moapa dace have been declining since the species was federally listed in 1967. These fish populations were under threat from the upstream invasion of non-native fish, principally the blue tilapia (*Oreochromis aurea*). To combat the decline of these endangered and sensitive species, the BLM constructed three concrete fish barriers (Hidden Valley, Perkins, and the Narrows) on the Muddy River. Combined with the existing upstream barrier located within the Moapa Valley Wildlife Refuge and a water diversion on tribal land, the purpose of the fish barriers was to prevent the continued spread of non-native fishes up the Muddy River, thereby decreasing the predation and competitive pressure imposed by introduced fishes on the Moapa dace and other sensitive fish species. The Project also facilitated the treatment with rotenone and eradication of non-native fishes in 2011 and 2012. The number of Moapa dace increased from approximately 450 in 2008 to over 2000 in 2014. In total, the BLM has spent over $850,000 on recovery efforts for this species in the Muddy River.

Impending threats to the Moapa dace include invasion by the Red-Swamp crayfish in the Muddy River. The BLM plans to retrofit the existing Perkins fish barriers to install a crayfish barrier to keep this invasive species from threatening Moapa dace populations. To mitigate potential adverse effects to Moapa dace from the Proposed Action's groundwater use, the Applicant will fund the design and installation of this crayfish barrier to prevent upstream movement of this invasive species. The BLM has determined that the estimated cost for the initial design and implement of the barriers on a Project-specific basis is $25,000.

Mitigation Measure TECWS-1: The Applicant shall fund the design and installation of crayfish barriers to protect Moapa dace from upstream migration of invasive species through the payment of $25,000 to BLM. These funds would further the BLM and its partner agencies' existing efforts to eradicate non-native species from the historic range of Moapa dace and thereby promote the continued recovery of this species.

D. Reasonable and Prudent Measures Included in the Project-specific Biological Opinion

Reasonable and prudent measures and terms and conditions to avoid or reduce potential impacts are identified in the Project-specific BO, which is provided in Appendix C of this Decision Record. For example, the applicant must:

1. Notify the Southern Nevada Fish and Wildlife Office and BLM by telephone (702 515-5230) or email within 24 hours of locating any dead or injured desert tortoises. The report must include the date, time, and location of the carcass, a photograph, cause of death, if known, and any other pertinent information.

2. Transport injured desert tortoises to a qualified veterinarian for treatment. Contact the Service regarding their final disposition if any injured desert tortoises survive.

3. Handle dead specimens to preserve biological material in the best possible state for later analysis, if such analysis is needed. The Service will make this determination when the BLM or the applicant provides notice that a desert tortoise has been killed by project activities.

Compliance and Monitoring: The BLM described a monitoring and enforcement program for projects within Solar Energy Zones in Section 9 of the Record of Decision for the Solar PEIS (BLM 2012, p. 19). Section 9 explains:

> *Required design features and any additional mitigation measures will be identified in ROW authorizations for individual projects. These measures will be monitored by solar energy project developers and the appropriate Federal agency to ensure their continued effectiveness through all phases of development. In cases where monitoring indicates that mitigation measures are ineffective at meeting the desired resource conditions, the BLM would take steps to determine the cause and take corrective action using adaptive management strategies. This information would also be used to inform the authorization of future solar energy development activities on BLM-administered lands.*
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> *The BLM has committed to developing and incorporating a larger monitoring and adaptive management strategy into its Solar Energy Program to ensure that data and lessons learned about the impacts of solar energy projects will be collected, reviewed, and, as appropriate, incorporated into BLM's Solar Energy Program in the future. This long-term solar monitoring and adaptive management plan will be based on BLM's Assessment, Inventory and Monitoring (AIM) Strategy developed in 2011. It will also take advantage of and augment other AIM efforts, including Rapid Ecoregional Assessments, the national landscape monitoring framework, greater sage-grouse habitat analysis, and an array of local, management-driven monitoring efforts.*

Consistent with regulatory requirements (40 CFR 1505.2(c)), the Solar PEIS ROD, and BLM NEPA Handbook H-1790-1 (BLM 2008, p. 105 et seq.), the BLM is adopting monitoring and enforcement measures to assure that necessary actions will be implemented for the duration of the Project and that the

BLM's decisions in the Solar PEIS ROD and this Decision Record are carried out in accordance with its approvals.

V. RATIONALE FOR DECISION

The environmentally preferred alternative is determined by evaluation against the national environmental policy articulated in Section 101 of NEPA and implemented through regulations, policies, and guidelines issued by the Council on Environmental Quality at 40 CFR 1500. Implementation of the Proposed Action will foster and promote the general welfare, for example, by providing a viable alternative to serving electricity demands with fossil fuels and reducing the energy sector's contribution of greenhouse gas emissions (see, e.g., EA p. 3.3-6), generating approximately 1,200 to 1,300 jobs (see, e.g., EA p. 3.19-7), and helping the BLM to attain its mission of sustaining the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations. Accordingly, the BLM has determined that the Proposed Action is the environmentally preferred alternative.

The Proposed Action furthers national renewable energy policy established in the Solar PEIS ROD as well as the following authorities:

- Executive Order 13212, dated May 18, 2001, which mandates that agencies act expediently and in a manner consistent with applicable laws to increase the "production and transmission of energy in a safe and environmentally sound manner."

- President Obama's Climate Action Plan, dated June 2013. In 2012 the President set a goal to issue permits for 10 gigawatts of renewables on public lands by the end of the year. The DOI achieved this goal ahead of schedule and the President has directed it to permit an additional 10 gigawatts by 2020.

- The Energy Policy Act of 2005 (Public Law [P.L.] 109-58). Section 211 of the Act states, "It is the sense of the Congress that the Secretary of the Interior should, before the end of the 10-year period beginning on the date of enactment of this Act, seek to have approved non-hydropower renewable energy projects located on the public lands with a generation capacity of at least 10,000 megawatts of electricity."

- Secretarial Order 3285A1, Renewable Energy Development by the Department of the Interior, dated February 22, 2010. This Secretarial Order establishes the development of renewable energy as a priority for the DOI and creates a Departmental Task Force on Energy and Climate Change. It also announced a policy goal of identifying and prioritizing specific locations (study areas) best suited for large-scale production of solar energy.

- Secretarial Order No. 3330, Improving Mitigation Policies and Practices of the DOI, dated October 31, 2013. The DOI's Energy and Climate Change Task Force (Task Force) which includes all Assistant Secretaries and Heads of Bureaus and chaired by the Deputy Secretary, is directed to develop a coordinated Department-wide, science-based strategy to strengthen mitigation practices so as to effectively offset impacts of large development projects of all types through the use of landscape-level planning, banking, in-lieu fee arrangements, or other possible measures.

VI. PUBLIC INVOLVEMENT

The BLM encouraged and facilitated public involvement early and consistently throughout the NEPA process for the Western Solar Plan, to which the attached EA tiers. The BLM also sent letters to Tribes; Federal, state, and local agencies; private landowners; and other interested parties as documented in Table 4-1 of the attached EA (p. 4-4 et seq.) to solicit comments and concerns about the Proposed Action. A

public comment period for the EA and unsigned FONNSI was offered between December 9, 2014 and January 7, 2015. Letters received are provided in Appendix E to this Decision Record. The BLM responded in writing to all substantive comments. Response letters also are provided in Appendix E. Additionally, an open house was held on December 10, 2014, from 6:00 to 8:00 pm, at the BLM Southern Nevada District Office located at 4701 North Torrey Pines Drive in Las Vegas, Nevada to provide an opportunity for the BLM to keep the public apprised of the NEPA process for the three Dry Lake SEZ projects, including the Playa Solar Project.

VII. ERRATA

Input received from agencies and members of the public resulted in the following clarifications and revisions being made in this Decision Record:

- Chapter 1 describes the acreage that could be affected by the three solar projects proposed within the Dry Lake SEZ (see, e.g., EA, pp. 1-2, 1-3, 1-4). To clarify, the area that could be affected by this development effort totals approximately 11,263 acres (3,083 acres in the three Dry Lake SEZ project sites and 8,180 acres surveyed within the recipient site, where desert tortoises from the project sites will be translocated to and monitored post-translocation).

- Section 2.2.17.1 (EA, p. 2-24 et seq.) lists the management plans the Applicant must prepare in accordance with design features set forth in the Solar PEIS ROD and other requirements. Although a Hazardous Materials and Waste Management Plan was inadvertently left off the list, such a plan will be required.

- Figure 3.8-1 on page B-9 of the attached EA depicted eagle nests and observations. This figure has been revised and, as revised, is provided in Appendix F.

The BLM is also revising the discussion of potential groundwater impacts:

- Section 2.2.6.1 (EA, p. 2-9) identifies a total of up to 1,350 acre-feet of water over an approximately 18-month period as the amount of water needed to construct the Proposed Action and up to 15 acre-feet per year (afy) as the amount of water needed to operate and maintain it. The amount of water needed to operate and maintain the Project is being reduced to 5 afy.

- Section 3.22 (EA, p. 3.22-1) explains that the analysis of potential impacts to groundwater tiered to the Draft Solar PEIS (BLM and DOE 2010 Section 5.9, p. 5-37 et seq., Section 11.3.9.2, p. 11.3-57, and Appendix M) and the Final Solar PEIS (BLM and DOE 2012 Sections 5.9, p. 57 et seq., and Section 11.3.9.2, p. 11.3-18) and also relied on two additional existing studies for conclusions regarding impacts to listed and sensitive groundwater dependent species such as the Moapa dace: USFWS's Intra-Service Programmatic Biological Opinion on Moapa Dace (USFWS 2006); and the Mifflin and Associates (Mifflin) Hydrogeologic and Groundwater Modeling Analysis for the Moapa Paiute Energy Center Study (Mifflin 2001).

  In response to comments received on the EA and as part of the Project-specific ESA Section 7 consultation process, the BLM has evaluated more recent hydrologic studies in formulating its conclusions, namely: Tetra Tech Inc., 2012a. Development of a Numerical Groundwater Flow Model of Selected Basins within the Colorado Regional Groundwater Flow System, Southeastern Nevada: Consultants' Report to the National Park Service (NPS), USFWS, and BLM September 2012; and Tetra Tech Inc., 2012b. Predictions of the Effects of Groundwater Pumping in the Colorado Regional Groundwater Flow System, Southeastern Nevada: Consultants' Report to the NPS, USFWS, and BLM September 2012. These studies provide more certainty regarding the hydrologic connectivity between the hydrogeomorphic basins in the White River Groundwater

Flow System. Based on these studies, the BLM has determined that the use of up to 1,325 acre feet of groundwater for the 18-month construction window and 5 afy for operations of the Playa Solar Project could contribute to ongoing adverse effects to groundwater dependent springs and associated aquatic communities including listed and sensitive resources such as the Moapa dace. These impacts, however, would be short term, occurring over a limited 18-month project construction window, and would not result in long term adverse impacts to the groundwater system or listed or sensitive resources.

- Consistent with EA Section 3.22's analysis of impacts to groundwater, Section 3.9 (EA, p. 3.9-12) concludes that no significant new impacts to threatened, endangered, and candidate wildlife species (including Moapa dace) beyond those identified in the Solar PEIS are anticipated to result from the Project. Because the BLM subsequently has determined that the Project's groundwater use could contribute to ongoing adverse effects to groundwater dependent springs and associated aquatic communities including listed and sensitive resources such as the Moapa dace, the BLM is revising the discussion of mitigation measures in Section 3.9 to include Mitigation Measure TECWS-1, the text of and rationale for which are set forth in full above.

VIII. FINAL AGENCY ACTION

A. Right-of-Way Authorization

It is my decision to approve right-of-way grants to Playa Solar, LLC, subject to the terms, conditions, stipulations, Plan of Development, and environmental protection measures developed by the Department of the Interior and reflected in this Decision Record. This decision is effective on the date this Decision Record is signed.

DATE: May 27, 2015

Neil Kornze
Director
Bureau of Land Management

B. Secretarial Approval

I hereby approve this decision. My approval of this decision constitutes the final decision of the Department of the Interior and, in accordance with the regulations at 43 CFR 4.410(a)(3), is not subject to appeal under Departmental regulations at 43 CFR Part 4. Any challenge to this decision, including the BLM Authorized Officer's issuance of the right-of-way as directed by this decision, must be brought in Federal district court.

DATE: 5-27-15

Janice M. Schneider
Assistant Secretary
Land and Minerals Management